

more extensive than that for 1927, and we are promised an early publication of the 1929 annual, also that for 1926. Annuals for earlier years will be published hereafter at the rate of about two per year. The new annual contains a general discussion in both Polish and French of the net-work of stations and the types of observations. The data for 12 stations are published in extenso by days. Those for 122 stations are fairly complete, while data for rainfall comprise the reports from the 946 remaining stations of the Polish Weather Service. The details concerning locations, exposures, and heights of the 1,080 stations are presented in Polish (pp. 10-124).—C. F. B.

*The International Meteorological Committee, Prof. E. van Everdingen, President.*—The editor has received the following letter from Professor van Everdingen. The letter is self-explanatory.

DEAR SIR: In his footnote and comments to the Statutes of the International Meteorological Organization, Mr. Henry expresses doubts as to the exact date of the creation of this organization.

It certainly may be considered as a kind of puzzle to find out what the exact date was, and also 1873 has certain rights as the year of the first international meteorological congress at Vienna, which created a permanent committee of seven members. But the Copenhagen conference has chosen 1878 as the year in which this permanent committee, meeting at Utrecht in October (non-official, No. 13, p. 18), drew up by-laws for the organization of a conference, nominating a committee, the powers of which end at the next conference. The name International Meteorological Committee was chosen by the Rome conference of 1879 (p. 16 of the English report, official No. 36).

It is true that the name "organization" was chosen officially only in 1919, but the organization existed long before, exactly in

the way as described by Mr. Henry in his last sentences on page 156. It is strange therefore that he should identify on page 155 the organization with the committee, which is only one of its parts. As this mistake occurs frequently with persons not familiar with our meetings, I have thought it worthwhile to draw attention to it when appearing in so prominent a place.

(Signed) E. VAN EVERDINGEN,  
President, International Meteorological Committee.

*End of the 1930 drought in the Potomac Basin.*—A substantial rain of 0.94 inch in 24 hours fell on December 26-27, 1930, and this rain probably marked the termination of the severe drought that has persisted in Atlantic seaboard States for about one year. The rainfall at Washington, D. C., for 1930 up to the end of the year was deficient 20.50 inches, or 51 per cent of the normal annual precipitation.—A. J. H.

*Climatological summary for Chile, October, 1930 (by J. Bustos Navarrete, Observatorio del Salto, Santiago, Chile).*—Intensification in the atmospheric circulation over the Pacific Ocean was accompanied by a return of unsettled weather, depressions being mapped during the periods 2d-4th, 12th-13th, 21st-23d, 24th, and 27th-28th. Anticyclonic conditions marked the following periods: 1st-3d, 5th-7th, 7th-10th, 14th-16th, 19th-21st, and 28th-30th. Unsettled weather and rain abated at the close of the month.

The most notable feature of the month was the violent electrical storm at Santiago on the evening of the 13th.—Translated by W. W. R.

## BIBLIOGRAPHY

C. FITZHUGH TALMAN, in charge of Library

### RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

#### Alippi, Tito.

La previsione del tempo. Bologna. [1930.] viii, 165 p. figs. plates. 24 cm.

#### Friedrich, Wilhelm.

Die Messung der Verdunstung vom Mittellandkanal bei Sehnde in den Jahren 1925 bis 1927. Berlin. 1930. 51 p. illus. 35 cm. (Jahrb. für die Gewässer. Norddeutsch. Bes. Mitt. Bd. 6, Nr. 1.)

#### Glasspoole, John.

Areas covered by intense and widespread falls of rain. With an abstract of the discussion upon the paper. Ed. by H. H. Jeffcott. London. 1930. p. 137-194. figs. 21½ cm. (Exc.: Minutes of proc. Inst. civil engin. v. 229. sess. 1929-1930. pt. 1.)

#### International geodetic and geophysical union.

Photographic atlas of auroral forms and scheme for visual observations of aurorae. Oslo. 1930. 24 p. plates. 30 cm.

#### Knoch, Karl.

Klima und Klimaschwankungen. Leipzig. 1930. 150 p. figs. 18½ cm. (Wissenschaft und Bildung. 269.)

#### Marmer, H. A.

Gulf stream and its problems. Washington. 1930. p. 285-307. figs. 25 cm. (Smith. rep., 1929.)

#### Mathias, E.

La foudre, ses différentes formes—la matière fulminante. no. 1-5. Paris. n. d. figs. 24½ cm. (Extr.: Annales des postes, télég. et téléph. Nov. 1927; juil. 1928: août, oct., déc. 1929.)

Monographie de l'éclair fulgurant. Compléments relatifs à ses formes terminales. Paris. 1930. 117 p. figs. plates. 24 cm. (Bull. de l'Inst. et observ. de phys. du globe du Puy-de-Dôme. no. 2. 1930.)

Remarques sur la pression électrostatique des foudres sphériques. Paris. n. d. 7 p. 24 cm. (Extr.: Annales des postes, télég., et téléph. (Avril 1930.))

#### Russia. Hydro-meteorological section.

. . . Album of ice forms. Leningrad. 1930. 16 p. plates. 17½ cm. [Author, title and text in Russian and English.]

#### Sarasola, Simon.

Ley fundamental de la circulacion ciclonica a diversas alturas. [Habana. 1930.] 2 sheets. 50½ cm. (Bol. hidrog. Habana. no. 99-100. Feb. 10, 25, 1930.)

Movimientos del mar en los ciclones. Su importancia en la revision . . . [Habana. 1930.] 2 sheets. 50½ cm. (Bol. hidrog. Habana. no. 102-103. Mar. 25, Abr. 10, 1930.)

## SOLAR OBSERVATIONS

### SOLAR AND SKY RADIATION MEASUREMENTS DURING NOVEMBER, 1930

By HERBERT H. KIMBALL

For reference to descriptions of instruments and exposures, and an account of the method of obtaining and reducing the measurements, the reader is referred to this volume of the REVIEW, page 26.

Table 1 shows that solar radiation intensities averaged above the normal intensity for November at Washington, D. C., and slightly below normal at Madison, Wis., and Lincoln, Nebr.

Table 2 shows an excess in the total solar radiation received on a horizontal surface directly from the sun and diffusely from the sky at Madison, Lincoln, Chicago, Twin Falls and La Jolla, and a deficiency at Washington, New York, and Fresno.

Skylight polarization measurements were obtained at Washington on November 6 only and give a percentage of 52. At Madison, measurements obtained on 4 days give a mean of 62 per cent and a maximum of 68 per cent on the 22d. The values for both stations are considerably below the corresponding November averages for the respective stations.

TABLE 1.—*Solar radiation intensities during November, 1930*

[Gram-calories per minute per square centimeter of normal surface]

Washington, D. C.

Date	Sun's zenith distance										
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	Noon
	75th mer. time	Air mass									Local mean solar time
	e.	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	5.0	e.
	nm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	nm.	
Nov. 1	3.96	0.86	1.00	1.08			1.22	0.90	0.75	0.55	2.49
Nov. 6	2.49										
Nov. 7	1.88						1.19	1.12	0.94	0.84	2.36
Nov. 8	2.74						1.35	1.35	1.20	1.01	2.36
Nov. 10	4.37	0.71	0.86	0.98	1.12						3.81
Nov. 28	1.07		0.95	1.19	1.26		1.23	1.06	0.88	(0.60)	
Means		(0.78)	0.94	1.03	1.26						
Departures		+0.03	+0.08	+0.08	+0.08		+0.06	+0.07	+0.04	-0.13	

## Madison, Wis.

	5.16	1.06	1.15	1.26	1.42	1.07		0.94		5.16
Nov. 4	2.87							1.22		2.16
Nov. 5	2.26		1.13	1.28	1.36			1.18		1.78
Nov. 6	2.36						1.23	0.83		2.06
Nov. 7	4.95							0.89		5.56
Nov. 10	6.76	0.09	0.80	1.00	1.15					7.57
Nov. 12	4.57							0.96		5.36
Nov. 17	6.76						0.98			8.48
Nov. 19	3.63							1.19		3.99
Means		(0.88)	0.91	1.07	1.19			1.03		
Departures		±0.00	-0.10	-0.07	-0.10			-0.10		

## Lincoln, Nebr.

	4.37		0.82	1.01	1.34		1.25	1.00	0.95	0.77	4.17
Nov. 5	2.49		1.11	1.26	1.42			1.21	1.10	0.97	1.96
Nov. 8	3.81		0.78	0.94	1.18		1.19	1.01	0.85	0.73	6.50
Nov. 10	7.04	0.91	1.02	1.12	1.31		1.30				7.87
Nov. 11	6.50	0.51	0.78	0.98	1.12						4.95
Nov. 13	6.50	0.91	1.02	1.16	1.32		1.11	0.94	0.83	7.29	
Nov. 17	4.95	0.63	0.80	1.09	1.37		1.40	1.22	1.08	0.96	6.02
Nov. 18	5.36	0.63	0.73	0.92	1.24		1.28	1.12	1.00	0.83	7.29
Nov. 21	2.87	1.01	1.09	1.28	1.45		1.27				3.00
Nov. 22	3.45	1.00	1.06	1.26	1.46						3.63
Nov. 25	3.63		1.13	1.24							2.87
Means		0.80	0.94	1.12	1.29		1.28	1.13	0.99	0.85	
Departures		-0.10	-0.08	-0.05	-0.07		-0.07	-0.06	-0.05	-0.07	

1 Extrapolated.

TABLE 2.—*Total solar radiation (direct+diffuse) received on a horizontal surface*

Week beginning	Average daily totals										
	Washington	Madison	Lincoln	Chicago	New York	Twin Falls	Pittsburgh	Gainesville	Fresno	La Jolla	Miami
1930											
Oct. 29	242	220	306	147	120	305	133	319	334	321	336
Nov. 5	247	225	286	136	188	234	138	309	281	276	279
Nov. 12	81	128	229	86	68	178	83	281	196	210	341
Nov. 19	137	110	176	86	113	162	161	293	280	292	317
Nov. 26	214	156	186	87	138	164	116	206	217	233	187
Departures from weekly normals											
Oct. 29	+6	+36	+66	+10	-48	+29		+21	+53		
Nov. 5	+20	+56	+57	+20	+45	+31		-4	+22		
Nov. 12	-105	-9	+29	-13	-54	-39		-63	-42		
Nov. 19	-41	-20	-27	-5	+4	+59		+38	+26		
Nov. 26	+55	+30	+1	+5	+41	+59		+5	-47		
Accumulated departures on Dec. 2	+8183	+1806	-1218	+679	+1176			-2136	-1412		

## POSITIONS AND AREAS OF SUN SPOTS

[Communicated by Capt. J. F. Hellweg, Superintendent United States Naval Observatory. Data furnished by Naval Observatory, in cooperation with Harvard, Yerkes, Perkins, and Mount Wilson Observatories. The differences of longitude are measured from central meridian, positive west. The north latitudes are plus. Areas are corrected for foreshortening and are expressed in millions of sun's visible hemisphere. The total area, including spots and groups, is given for each day in the last column]

Date	Eastern standard civil time	Heliographic			Area		Total area for each day
		Diff. long.	Longitude	Latitude	Spot	Group	
1930							
Nov. 1 (Naval Observatory)	10 40	+37.0	116.2	-5.0			231
		+38.0	117.2	-10.0			46
		+51.0	130.2	-7.0			525
Nov. 2 (Naval Observatory)	10 45	+49.5	115.5	-11.0			802
		+53.5	119.5	-5.0			278
Nov. 3 (Naval Observatory)	10 44	+65.5	131.5	-8.0			401
		+66.0	132.0	-12.0			691
Nov. 4 (Mount Wilson)	11 40	-61.0	338.0	+12.0			66
		+85.0	124.0	-6.0			260
Nov. 5 (Naval Observatory)	13 16	-46.5	338.5	+12.5			62
		+34.5	338.7	+12.5			56
Nov. 6 (Naval Observatory)	10 47	-21.5	338.6	+12.5			56
		-6.5	339.0	+12.5			43
Nov. 7 (Naval Observatory)	10 45	+6.0	339.7	+12.5			34
		+19.0	339.5	+13.0			31
Nov. 10 (Naval Observatory)	13 58	+34.0	339.5	+13.0			12
		-30.4	345.6	+14.0			202
Nov. 11 (Naval Observatory)	10 45	+45.5	339.6	+13.0			9
		-66.0	200.0	+5.0			299
Nov. 12 (Naval Observatory)	13 20	-51.0	202.2	+5.0			400
		-33.8	206.6	+3.2			400
Nov. 16 (Yerkes Observatory)	12 33	-34.9	205.5	+3.5			29
		-37.7	202.7	+4.7			26
		-37.4	203.0	+5.4			22
		-40.9	199.5	+7.6			71
Nov. 17 (Yerkes Observatory)	14 48	-44.0	196.4	+3.0			311
		-18.1	207.9	+4.3			98
		-19.1	206.9	+4.4			62
		-21.6	204.4	+4.6			22
		-22.4	203.6	+5.2			36
		-25.6	200.4	+6.2			16
		-26.1	199.9	+8.2			28
		-30.4	195.6	+4.0			202
Nov. 18 (Perkins Observatory)	10 30	-17.0	197.9	+3.5			124
		-12.5	202.4	+5.0			93
		-5.0	209.9	+3.0			155
Nov. 19 (Perkins Observatory)	9 10	-72.5	130.0	-7.0			372
		-4.0	198.5	+2.5			124
		-0.5	202.0	+5.0			62
		+4.5	207.0	+4.0			124
		+9.0	211.5	+8.0			155
Nov. 20 (Naval Observatory)	12 18	-57.0	130.8	-8.0			651
		+15.0	202.8	+3.5			370
Nov. 21 (Mount Wilson)	11 45	-72.0	102.9	-8.0			444
		-71.0	103.9	+8.0			130
		-40.0	134.9	-6.0			264
		+32.0	206.9	+2.0			1,130
Nov. 22 (Naval Observatory)	14 24	-66.0	94.3	+3.5			292
		-57.5	102.8	-9.5			62
		-57.0	103.3	-7.5			216
		+45.0	205.3	+3.5			278
Nov. 23 (Naval Observatory)	11 1	-54.5	94.5	+4.0			741
		-46.0	103.0	+6.0			108
		-45.0	104.0	-9.0			388
		-16.0	133.0	-7.5			216
Nov. 24 (Naval Observatory)	12 42	-39.5	95.4	+3.5			231
		-32.0	102.9	+5.5			93
		-31.0	103.9	-9.0			401
		-0.5	134.4	-7.0			216
		+47.5	182.4	-27.5			46
		+74.0	208.9	+3.5			247
Nov. 25 (Naval Observatory)	11 32	-27.5	94.8	+4.0			1,049
		-19.5	102.8	+5.7			401
		-18.0	104.3	-9.0			388
		+12.5	134.8	-7.5			108
		+61.0	183.3	-27.5			77
Nov. 26 (Naval Observatory)	10 43	-49.5	60.1	+8.5			673
		-35.5	74.1	+14.5			43
		-12.0	97.6	+3.0			15
		-7.5	102.1</td				